REMARKS

Original claims 1-17, previously presented claims 18-27 and new claim 28 are pending. Claims 20 and 23 have been placed in independent form. The examiner is thanked for the indicated allowability of claims 20-21 and 23-26.

Claim 22 has been amended to depend from allowable claim 20.

It is respectfully suggested that the rejection of claim 27 was in error. It depended from allowable claim 23, not claim 22 with which it was rejected.

In any event, claim 22 is now allowable as is claim 27.

The Rejection of All Claims 1-19 Remains Unsupported

All of original claims 1-17 and new claims 18 and 19 have been rejected as obvious in view of Greanias et al (U.S. Pat. No. 5,007,085 hereafter "Greanias") in view of Inoue et al (U.S. Pat. No 5,831,600 hereafter "Inoue") and now in further view of Smith III (U.S. Patent 5,466,158) instead of Ohara et al (U.S. Pat. No. 6,297,812 B1). The rejections of claims 1-19 are respectfully traversed on the grounds that the combination of Greanias with Inoue remains unsupported for the following reasons.

Regardless of the teaching of Inoue, the substitution of a finger or the stylus of Inoue for the stylus disclosed and claimed in Greanias is unsupported.

A *prima facie* case of obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In Re Fine*, 837 F.2d 1071, 5 USPQ2d 1598 (Fed. Cir. 1988); MPEP §2143. 01.

The fact that references can be combined or modified is not sufficient for *prima facie* obviousness. MPEP §214301.

The fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness. MPEP §2143.01

Finally and most importantly, the proposed modification cannot change the principle operation of a reference. MPEP §2143.01 The examiner's remarks do not address this issue.

As was pointed out in the Remarks section of the previous Amendment, the Greanias patent is entitled "Remotely Sensed Personal Stylus". There are five objects of the invention (col. 2, lines 24-40) and all refers specifically to an interactive stylus. So does each descriptive paragraph constituting the substantive remainder of the Summary of the Invention claim portion of the Greanias (col. 2, line 46 – col. 3, line 12). Each independent claim (1, 13, 23, and 32) is directed to a remotely sensed personal stylus (claim 23) or a system specifically utilizing such a stylus (1 and 13) or a method of controlling access to a computer specification using such a stylus (claim 32). The stylus is the invention of Greanias rather than merely an optional or replaceable element of an invention.

Furthermore, the styli of Greanias are interactive. The stylus and finger of Inoue are not or at least are not in the same way. The stylus 60 in Greanias is configured to receive position detection signals being transmitted by the "scanning circuit" and transmitting them back to the computer (embodiments of Figs. 1-5) with an identification code and amplitude value so the computer can calculate the position of the stylus on the display/array. Alternatively, the stylus 160 (Figs. 6-7) receives a simple fixed frequency triggering signal without data from the array and returns a different, data signal to the array, which is then detected by the array and outputted for location identification processing. There is no provision in Greanias for a finger to transmit an identification code and amplitude value back to anything. The Examiner's proposed substitution of a finger for the stylus changes the principle of operation of Greanias, the primary reference.

The third reference, Smith III, is not relied upon to teach or suggest anything which would lend support to the combination of Greanias with Inoue as proposed by the Examiner. Accordingly, the combination remains unsupported.

The Rejections of Dependent Claim 2 and Claims 3-12 Depending Directly or Indirectly Therefrom and Claims 15-17 Are Further Unsupported For the Following Additional Reason

Claim 2 depends from Independent Claim 1 and further calls for the scanning circuit to comprise a matrix of conductive lines arranged as spaced apart columns and spaced apart rows:

....wherein for each specific column conductive line:

> (i) an RF signal is input into the specific column conductive line according to a predetermined input sequence as directed by a first coordinated control signal (655) outputted by the control circuit (610), and
>
> (ii) coupled RF signals received from the specific column conductive line by the plurality of row conductive lines are outputted according to a predetermined output sequence as directed by a second coordinated control signal (660) outputted by the control circuit (610).

It is respectfully submitted that the examiner has either mischaracterized or misunderstood Greanias. First, Greanias describes several different embodiments. In all but one, the column and row conductors are each powered in some sequence to transmit 40 kHz signal bursts which the stylus 60attempts to receive. Only the last embodiment of Greanias, which is depicted in and described with respect to Fig. 6, involves using the matrix array conductors as receiving antennae. The other embodiments, including the embodiments of Figs. 2 and 3 relied upon by the examiner, use an IR transmitter in the stylus and an IR receiver in the work station with which the stylus is used. (See col. 4, lines 41-63.) This is further confirmed in Fig. 3 where there is only a control line 92 providing an input signal from the data bus 90 to the multiplexer 74 and NO signal out from the multiplexer to the bus. Compare that with Fig. 6 which depicts elements 84, 86 carrying data from the multiplexer 74 to the bus 90 and no coupling between the stylus and the bus as shown in Fig. 3 and relied upon by the examiner.

Only the Fig. 6 embodiment of Greanias can be said to be "configured to detect the presence of a coordinate input device (such as a stylus) [as it] enters the RF field generated by the RF scanning circuit" as asserted by the Examiner in the last action. However, a review of that figure and the description of its operation at col. 6, line 42- col. 8, line 3, particularly the paragraph spanning cols. 7 and 8, reveals that the same conductor(s) used to transmit the 40 kHz signal are also used instantaneously thereafter to detect any 100 kHz return signal of the stylus.

It was previously remarked in applicant's first amendment that "(n)othing in Greanias discloses or suggests that the WIRE SELECT MUX 74 of Fig. 6, changes wire connections between the transmission mode and the instantaneously following detection mode." The examiner responds in the pending action that "this characteristic ... is not discussed in any of the claims." However, as was noted in the above quoted portion of claim 2, "...coupled RF signals received from the specific column conductive line by the plurality of row conductive lines are outputted ...." This does require a particular mode of operation of the Greanias multiplexer,

namely transmission from one conductor in a first of the two sets of parallel positioned conductors and receiving that coupled signal from that transmitting conductor in the remaining set of conductors transverse to the one transmitting conductor.

Greanias is not configured in the manner claimed. In the Greanias embodiment of Figs. 1-5, no RF signal received in any of the conductive lines from another conductive line is outputted in any form. In the Greanias embodiment of Figs. 6-7, an RF signal that is input into any of the one or more conductive lines is not received from that line by any of the other lines and outputted to any control circuit. The conductors in Greanias are activated in some unstated order to trigger a response from the stylus 160 and the return signal from the stylus is what is detected and outputted by the conductive lines.

The examiner's statement at Page 3 of the pending action that in Greanias, "an RF signal is input into the specific column line (e.g. through the stylus) ... (and) wherein the RF signals (*plural?*) are then received from the specific column conductive line (*singular)* and is outputted (*singular)* according to a predetermined output sequence" does not really make sense. In any event, the statement of the combination does not completely parallel and thus does not invalidate the claimed invention which requires that the RF signals outputted by the various conductor lines be "received from the specific conductor line" which receives the input RF signal.

And of course, there is no way a finger can perform either the receiving functions of the stylus 60 of the embodiments of Figs. 1-5 or the transponding operations performed by the stylus 160 of the embodiment of Figs. 6-7. Again, changing the way Greanias works to correspond to the claim language would change the principle of operation of both the Greanias stylus and the location system.

Method claim 15 depends from independent method claim 14 and calls for, in pertinent part:

> ...
> (a)(i) inputting an RF signal into a specific one of the plurality of column conductive lines according to a predetermined input sequence;
>
> (a)(ii) outputting coupled RF signals received from the specific column conductive line by the plurality of row conductive lines according to a predetermined output sequence; and
>
> (a)(iii) repeating steps (a)(i) and (a)(ii) for each of the column conductive lines.

Claim 15 calls for operating a device (like that of claim 2) where an RF signal is input into a specific conductor of a first set of parallel conductors and that coupled RF signal received from that specific first conductor is outputted to a control circuit from the conductors of the remaining set of parallel conductors transverse to the first set. Claim 15 and claims 16-17 depending therefrom are therefore patentable for the same reasons set forth above with respect to claim 2.

The Rejection of Claim 10 Depending From Claim 2 Is Still Unsupported for the Following Additional Reason

Claim 10 calls for the RF signal to have a frequency of approximately 100 kHz where the RF signal is the signal originally input into each column conductor and also detected from each row conductor. Greanias talks only about transmitting a 40kHz signal from the conductor array for position detection and transmitting data from the stylus 160 on a frequency shift keying signal in the range of 100-300 kHz as a response. Using 100kHz as the input signal is contrary to the express teaching of the primary reference (Greanias) and the Examiner has cited no teaching or suggestion in the prior art to do so.

The examiner argues that the use of a particular frequency is a matter of design choice "unless it is clearly stated as to why the particular frequency ids crucial for the functionality of the device." One specific reason for a use of a 100 kHz signal is data filtering as referred to in paragraph **[0051]** on page 12 of the present application.

Regardless, since information is also being transmitted from the Greanias stylus 160 in the higher (100 kHz) frequency stylus output signal, transmitting a stylus location signal from the conductor array at or near the frequency of the stylus output signal could needlessly interfere with receipt of the stylus output signal by the conductor array.

Another requirement for a *prima facie* case of obviousness is that there must be a reasonable expectation of success and that expectation must be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 9478 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP 2142. There is nothing in the relied upon prior art that provides such an expectation of success with Greanias using 100 kHz for its location signal while a signal of the same frequency is being broadcast by the stylus.

The Rejection of Dependent Claim 11 Is Still Further Unsupported For the Following Additional Reason

The rejection of this claim, calling for the amplitude of the RF signal to be approximately 18 volt AC, is not based upon prior art but rather upon the characterization of merely being "well known" and an "obvious design choice". There is nothing in the prior art that indicates or even suggests this value is suitable let alone desirable from all other possible design choices for the Greanias system.

As just stated, another requirement for a *prima facie* case of obviousness is that there must be a reasonable expectation of success and that expectation must be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 9478 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP 2142. There is nothing in the relied upon prior art that provides such an expectation of success with Greanias using an 18 AC signal.

The Rejections of Independent Claim 14 and Claims 15-17 Depending Therefrom Are Still Further Unsupported For the Following Additional Reason

Independent claim 14 is directed to the method of using an interactive book system responsive to the presence of a human finger that sets forth the step of "(a) detecting the human finger as the finger enters an RF field generated by the reading system...." The Greanias system does not operate that way and to modify it to do so would impermissibly change its principle of operation.

The Rejections of Claim 18 and 19 Depending Therefrom Are Still Further Unsupported For the Following Additional Reason

Claim 18 is directed to the "...system of claim 1 wherein the control circuit is configured to analyze and select as a probable user input a single probable human finger presence from among a plurality of possible human finger presences detected simultaneously by the scanning circuit." There is no disclosure or suggestion in Inoue (or Greanias) that the system described therein is configured to or capable of selecting from "a plurality of possible human finger presences detected simultaneously", a single input as a probable human finger presence, let alone "a single most northern possible phuman finger presence as the probable user input" as is expressly set forth at the end of claim 19.

New Claim 28

New claim 28 is presented for examination. Claim 28 depends directly from original claim1 but includes only those elements from allowable claim 20 that are believed to have made that claim allowable. Support for the claim can be found in original claim 20.

Conclusion

For the foregoing reasons, reconsideration to withdraw of all the rejections of claims 1-19, 22 and 27, examination of new claim 28 and allowance of the application and all currently pending claims 1-28 are respectfully requested.

Respectfully submitted,

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